

UNITED STATES GOVERNMENT

Memorandum

[Handwritten initials]

TO : Refuge Manager, Medicine Lake NWR
Medicine Lake, Montana

FROM : Assistant Regional Refuge Supervisor
BSP&W, Portland, Oregon

SUBJECT: Annual Water Programs - 1971

DATE: February 26, 1971

We have reviewed and hereby approve Annual Water Programs submitted for Medicine Lake, Lamesteer and the satellites.

We will appreciate receipt of any information you can provide on the Sheep Creek Dam. We are interested in knowing just what effect this has on our water supply.

We are concerned you evidently feel we have "lost" water rights on the Chandler WPA. Prior correspondence evidences little basis for this assumption.

[Handwritten signature: Crayton J. Lankford]
Crayton J. Lankford

Attachment



5010-108

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

UNITED STATES GOVERNMENT

Memorandum

TO : Regional Supervisor, Division of
Wildlife Refuges

FROM : Acting Regional Engineer

SUBJECT: 1971 Annual Water Reports - Medicine Lake NWR
Lamesteer NWR
Northeastern Montana Wetlands

____ Supervisor
____ Associate
____ Asst. Mnt-Id
____ Asst. Wash-Or
____ Asst. Cal-Nev
____ Reg. Biol
____ Planner
____ Wilderness
____ Recreation
____ Mgt. Asst.
____ Secretary

DATE: February 17, 1971

From an engineering standpoint, this report is acceptable and complete. It is noted that Mr. White in his Montana Wetlands Report again indicates his feelings regarding the filing for water rights. Mr. White's concern is appreciated, however, by engineering memo of June 17, 1970, the problems of filing for water rights was clearly explained and the decision not to file concurred with the Division of Refuges, Regional Director's office and the Solicitor's office.

John V. Mack
John V. Mack

Encl.



5010-108

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

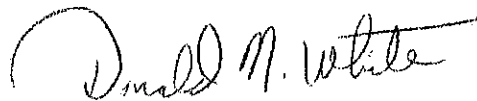
Regional Director, Bureau of Sport Fisheries &
Wildlife, Portland, Oregon

December 28, 1970

Refuge Manager, Medicine Lake Refuge
Medicine Lake, Montana

1971 Annual Water Program - Medicine Lake NWR

Attached for your review is the 1971 Annual Water Program for Medicine Lake Refuge. New features this year include the 1970 Sheep Creek water rights filing, water well use, and a section on the Northeastern Montana Wetlands.



Donald N. White

Hold lake up for fish

MEDICINE LAKE NATIONAL WILDLIFE REFUGE

MEDICINE LAKE, MONTANA

ANNUAL WATER PROGRAM - 1971

UNITED STATES DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE

MEDICINE LAKE NATIONAL WILDLIFE REFUGE

MEDICINE LAKE, MONTANA

ANNUAL WATER PROGRAM - 1971

UNITED STATES DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE

MEDICINE LAKE NATIONAL WILDLIFE REFUGE
MEDICINE LAKE, MONTANA

ANNUAL WATER PROGRAM - 1971

I. Record of 1970 Water Use

A. Source of Supply

Run-off water from melting snow in April and May, 1970 provided the major water supply for all refuge impoundments.

Lost Creek was the only water source which did not flow during 1970.

B. Type of Rights

The Bureau of Sport Fisheries and Wildlife through filings posted and recorded holds appropriative water rights as shown below. Two of our older wells have vested water rights.

Water Rights Filing No.	Source	Amount of Water Rights C.F.S.	Acres under Water Right
233163	Cottonwood Creek	100	3,640
233164	Sand Creek	75	3,640
233165	Lost Creek	25	840
233166	Sheep Creek	20	750
242886	Sheep Creek	300	2,287
233167	Lake Creek	100	3,640
233168	Big Muddy Creek	50	1,600 Homestead Lake
233169	Big Muddy Creek	1,200	2,000 Medicine Lake
Vested	Sandhill Well #1	3 gpm	None
Approp. (No. No.)	Sandhill Well #3	10 gpm	None
Vested	Old Hdqtrs. Well	300 gpm	None
Approp. (No No.)	New Hdqtrs. Well	25 gpm	None

C. Purpose of Use

All appropriated creek waters were used for irrigation of lakes and marshes to produce wildlife food, habitat, control disease and storage for late season water needs. All wells were used for livestock or domestic water use.

D. Season of Use

The main season of water use is from late March until early December each year. The water impoundments are frozen over from early December through March each year. The headquarters well is used throughout the year. The attached Annual Summary of Water Use form shows the period of use.

E. Quantity Used

A total of 35,660 acre feet of water entered the refuge via creek channels in 1970. An estimated 7.6 acre feet of water was pumped from four refuge wells. Of the previously mentioned 35,660 acre feet, 32,188 were retained in the refuge and 3,472 acre feet were released as excess to our needs.

F. Place of Use

The Annual Summary of Water Use form shows the general location and gives reference to the legal description of the place of use for all waters appropriated during 1970.

G. Adequacy of Supply

The water level in all impoundments filled to capacity in April and May, 1970. There was not much water (only 3,472 A.F.) in excess of our needs.

All impoundments had adequate water levels when freeze-up came in early November. The following chart shows the monthly levels in all units during the 1970 season.

MONTHLY RECORD OF GAUGE READINGS - 1970

IMPOUNDMENT	No. 4*	No. 6**	No. 10	No. 11	No. 12	Katy's Lake
PRESENT						
OPER. LEVEL	1943.00	1937.65	1945.00	1951.54	1954.00	1954.00
January	Frozen	Frozen	Frozen	Frozen	Frozen	Frozen
February	Frozen	Frozen	Frozen	Frozen	Frozen	Frozen
March	Frozen	Frozen	Frozen	Frozen	Frozen	Frozen
April	1942.88	1936.02	1945.23	Snow Cov.	1954.44	1954.52
May	1943.58	1937.16	1945.59	1951.44	1955.76	1954.80
June	1942.40	1937.46	1944.91	1950.92	1954.64	1954.58
July	1942.21	1936.95	1944.81	1950.93	1954.35	1954.50
August	1942.20	1936.54	1944.43	1951.02	1953.76	1954.00
September	1941.94	1936.00	1944.33	1951.02	1953.66	1954.00
October	1941.98	1935.90	1944.33	1951.06	1953.70	1954.10
November	Frozen	Frozen	Frozen	Frozen	Frozen	Frozen
December	Frozen	Frozen	Frozen	Frozen	Frozen	Frozen

All gauge readings as of the middle of each month.

* No. 4 - Medicine Lake

** No. 6 - Homestead Lake

Given below is a chart of the comparison of deficiencies in unit water levels at freeze-up time during the 1965-70 period.

DEFICIENCY IN ACRE FEET AS OF DECEMBER 1

	<i>Spring of 1966</i>	<i>67</i>	<i>68</i>	<i>69</i>	<i>70</i>	<i>71</i>
Impoundment	1965	1966	1967	1968	1969	1970
Medicine Lake	12,230	*24,800	*13,000	16,700	4,000	8,700
Homestead Lake	2,400	* 2,600	* 3,600	8,000	*6,000	*2,300
Katy's Lake	140	242	678	300	** 0	** 0
No. 10 Lake	860	1,526	1,600	1,800	900	600
No. 11 Lake	426	440	380	500	100	400
No. 12 Lake	231	1,080	500	3300	** 0	450
Total Deficiency	16,287	30,688	19,758	27,600	11,000	12,450

* Water released for disease control or marsh management.

** No deficiency, at operational level.

II. Recommendations for 1971

We will need approximately 12,450 or more acre feet of water to bring all impoundments up to operational level in the spring of 1971. We normally receive 25,000 or more acre feet each spring.

The following recommendations are offered for water management on Medicine Lake Refuge during 1971.

1. Current approved operational levels will be continued for 1971.
2. Impoundments will be filled as early in the spring as possible.
3. Homestead Lake has a tendency toward botulism. Often in the late summer the lake must be drawn down from one to two feet. We recommend to continue these drawdowns if necessary. However, Homestead Lake should be refilled in the fall when the danger of botulism has passed. This refilling is necessary to prevent the muskrat population from "freezing out". Homestead Lake can be refilled easily from Medicine Lake proper.
4. Water in excess of what is needed to obtain approved operational levels will be diverted downstream to the next impoundment. Excess water in Homestead Lake or Medicine Lake will be released back out into Muddy Creek.
5. The earthen dam placed across Sheep Creek by Alvin Erdahl of Froid, Montana should be checked in the spring of 1971. We need

to know if this dam is influencing our water supply. This dam of Erdahl's has been discussed in prior correspondence with the Regional Office.

6. The four wells are to be used as they have been for the past several years, that is for livestock or domestic use as necessary.

7. Proposed Water Use Priority

<u>Unit</u>	<u>Purpose</u>	<u>Priority</u>
Katy's Lake	Nesting and Rearing	1
No. 10 Lake	Nesting and Rearing	2
No. 11 Lake	Nesting and Rearing	1
No. 12 Lake	Nesting and Rearing	1
Gaffney Lake	Storage, Nesting and Rearing	2
Medicine Lake	Storage, Nesting and Rearing	2
Homestead Lake	Nesting and Rearing	1

LAMESTEER NATIONAL WILDLIFE REFUGE

WIBAUX, MONTANA

ANNUAL WATER PROGRAM - 1971

1. Source of Supply

Spring run-off water entering the reservoir via Lamesteer Creek is the entire source of water for the Lamesteer Reservoir.

2. Type of Rights

A "Notice of Appropriation of Water" claiming 427 acre feet of water of Lamesteer Creek was posted on June 30, 1938, over the signature of Wilbert A. Rodgers, Administrative Assistant, Bureau of Biological Survey, as authorized agent for the Secretary of Agriculture. The fact of posting was recorded in Book 6 of Miscellaneous on page 345 in the Wibaux County Recorder's Office, Wibaux, Montana, on July 16, 1938.

3. Purpose of Use

During the 1970 season all waters were used for wildlife use and flood control as called for in the "Notice of Appropriation of Water".

4. Season of Use

Water usage on the refuge is on a yearlong basis with the heaviest demands being made during the ice free period of March through November when evaporation and transpiration rates are the greatest.

5. Quantity Used

The major water supply was derived from melting snow in April and May, 1970. The water level in Lamesteer Reservoir held up well all year and was only 11 inches below crest at freeze-up in November.

6. Place of Use

All appropriated waters were used within the boundaries of the SE $\frac{1}{4}$ of Section 14 and all of Sec. 15, T12N, R60E of Montana Principal Meridan, Wibaux County, Montana.

7. Adequacy of Supply

The water supply for Lamesteer reservoir was excellent this year. We have no way of knowing the acre feet of water that passed over the spillway, but estimate it was a substantial amount.

8. Recommendations for 1971

Actually the Lamesteer spillway is nonadjustable and the water is impounded up to crest elevation and then spills over the structure. During very high

run-off periods water will go around the emergency spillway on the south side. Our main recommendation is to hold all water to crest operational level for wildlife use.

There is evidence of an estimated 15 acres being put into irrigated cropland just south of the Lamesteer dam. This would bear watching in 1971. The owner of the land, Mr. Wallace Scott, can pump out of the overflow only. The Bureau has water rights on water in the impoundment. Any sign of pumping directly from the reservoir will be reported to the Regional Office.

NORTHEASTERN MONTANA WETLANDS

SHERIDAN, ROOSEVELT AND DANIELS COUNTIES, MONTANA

ANNUAL WATER PROGRAM - 1971

1. Source of Supply

Melting snow on the drainage to these potholes, marshes and lakes comprise nearly all of the source for water.

2. Type of Rights

The Bureau has refused to file water rights on any of the Waterfowl Production Areas in Northeastern Montana. We have lost water rights on one lake owned in part by the Bureau, Chandler WPA. A private owner has already filed on this lake. The decision not to file for water rights may well deserve to be reviewed again before other private owners file water rights claims.

3. Purpose and Season of Use

All water received will be used for wildlife use, water conservation and recreation. The ice free period of April through November will be the season of use.

4. Quantity and Place of Use

We have no way of measuring accurately the amount of water received by the myriad of marshes, lakes and ponds in the Northeastern Montana Wetlands system.

5. Adequacy of Supply

The water supply is almost entirely dependent upon the amount of snowfall received. All we can do to obtain proper water levels is to pray more.

6. Recommendations for 1971

The lakes, ponds and marshes in the wetlands system are natural wetland areas and none have control structures of any type.

Aerial flights are flown in the spring and fall to check on the easements for drainage ditches or other possible violations.

Crude oil pollution from oil wells on or near Bureau land has happened recently in the area north of Westby, Montana. If crude oil pollution is observed the company involved should be contacted immediately regarding cleanup. If the company fails to clean up the oil spill within seven days then the matter should be turned over to the Regional Office.

Submitted: Donald W. White
Date: 12/28/70

Approved: _____
Date: _____